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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/466,832 12/20/99 ISHIKAWA

A P7443-9012

EXAMINER

MM91/0731

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ART UNIT

PAPER NUMBER

2855

DATE MAILED:

07/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/466,832

Applicant(s)

ISHIKAWA, ATSUSHI

Examiner

Lilybett Martir

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED 2nd ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraoka (Pat. 5,371,450) in view of Hiraoka (Pat. 5,912,025). Hiraoka (Pat. 5,371,450) teaches all the elements present in the controller of the claimed invention and a method of using the same, including:

- A first sensor as in element 25 to detect a relative position, a target value generator as in element 24-2 that generates a target value between the movable platen and the fixed platen as a target platen position value and generating a target mold clamping force value, and a mold clamping control unit as in element 30 (Col. 6, lines 20-23) for calculating a position deviation and a mold clamping deviation to selectively control a mold clamping motor as in element 11 based upon one of the position deviation and the mold clamping deviation, as in claim 1.
- A subtracting unit as in elements 24-3 and 24-5 for subtracting the detected platen position and the detected mold clamping force to produce position deviation and the mold clamping deviation values, a switch s in element 51

- used to selectively produce the position deviation and the mold clamping deviation, and a generating unit as in element 24 that generates control command values for the mold clamping motor as in element 11 to the selected deviation, as in claim 2.
- A first subtractor as in element 24-3 for subtracting the detected platen position, a second subtractor as in element 24-5 for subtracting the detected mold clamping force, a platen position compensation unit as in element 24-4, a mold clamping force compensation unit as in element 30-2, and a switch as in element 51 to selectively supply and produce the command and deviation values, as in claims 3-4.
 - A target value switch as in element 51, a detected value switch as in element 51, a subtractor as in element 30-1, a platen position and a mold clamping force compensation unit as in element 30-2, as in claim 5.
 - A platen position, with first and second control command values (Col. 8, lines 26-27) and a motor control unit as in element 30 for drivingly controlling a motor as in element 11, as in claims 6,7,8 and 9.
 - A platen position with first and second control command values (Col. 8, lines 26-27) an injection molding machine (Col. 3, lines 52-55) with a screw as in element 12 for injecting molten resin, and a control device as in element 30 for drivingly controlling a motor as in element 11, as in claims 10,11,12 and 13.

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- The method of controlling the mold clamping control device as in Claims 14-26, exist as an essential constituent or characteristic of the invention and therefore is inherently disclosed.

But he does not disclose:

- A second sensor 18 to detect a mold clamping force, as in claim 1.

Hiaroka (Pat. 5,912,025) discloses a control device that has a sensor as in element 32 for use in sensing the clamping force generated by a mold clamping system (Col. 2, lines 42-55), therefore controlling a motor as in element 16 that moves a platen.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Hiraoka's (Pat. 5,371,450) invention using his own teachings (Pat. 5,912,025) by providing a sensor for sensing a force generated by a mold clamping system, for the purpose of furnishing means for controlling a mold clamping motor.

Response to Arguments

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Faig et al. (Pat. 5,362,222) Injection molding machine having a vector controlled AC drive system.
- Allen (Pat. 4,131,596) Sensing system and method for plastic injection molding.
- Hold et al. (Pat. 3,870,445) Injection molding machine controls.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LM

Lilybett Martir
Examiner
Art Unit 2855

RCM

July 25, 2001



Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800